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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,706	09/21/2006	Hiroyuki Ikeuchi	52343	3106

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EXAMINER	
DARJI, PRITESH D	

ART UNIT	PAPER NUMBER
1793	

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03/18/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,706	IKEUCHI ET AL.	
	Examiner	Art Unit	
	PRITESH DARJI	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-8,10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yorimichi (JP 2000-63527).

Yorimichi teaches aqueous monomer solution having ethylenic unsaturated monomer and a cross linking agent in the solution. See [0022], [0028]. Then aqueous solution is polymerized to form hydrogel by cross linking. See [0026]. Hydrogel is extruded from a perforated structure having diameters of 0.8mm -28mm, which overlaps instantly claimed diameter. See [0052]. Hydrogel particles are pulverized and dried in order to form water absorbent resin. See [0070]. Hydrogel particles are ground and placed together for agglomerate shape. See [0046]. The surface of the perforated structure is contacted with extrusion structure for cross linking of composition thus making it surface cross linking. See [0057]. Ethylenediamine or diethylenetriamine can be used with monomer composition. See [0030]. The concentration of monomer in the aqueous solution is from 20-60 wt%, which overlaps instantly claimed weight percentage range. See [0038].

Regarding overlapping ranges the reference range overlaps the claimed ranges and considering the claimed ranges as a whole would have been obvious to one having

ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 USPQ 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,2 and 4,5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frenz (US 2002/0165288).

Frenz teaches water absorbing polymer particles having a surface cross linked structure. See [0029], [0030], [0063]. The water absorbing composition has absorbing agent hydrogel in which hydrogel exhibit an absorption rate (FSR) at least 0.15 g/g/s, water absorption capacity (CRC) 24 g/g and saline flow conductivity of at least 80 x 10^{-7} cm^3.s/g. See abstract. It is expected that absorbent would possess same wet porosity as instantly claimed. Particulate diameter is 100 denier. See [0091]. As a liquid permeability enhancing agent, silica is used. See [0094].

Regarding water absorption capacity a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that

one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

Regarding wet porosity, where the claimed and prior art product(s) are identical or substantially identical, or are produced by identical or substantially identical process(es) the burden of proof is on applicant to establish that the prior art product(s) do not necessarily or inherently possess the characteristics of the instantly claimed product(s), see In re Best, 195 USPQ 430.

Regarding particulate diameter, it would have obvious to one of ordinary skill in the art at the time of the invention to h9ave adjusted higher or lower diameter because differences in diameter will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such diameter is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)

Regarding claim 1 product by process limitation any difference imparted by product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making, see In re Brown, 173 USPQ 685, In re Fessmann, 180 USPQ 324, In re Spada, 15 USPQ2d 1655, In re Fitzgerald, 205 USPQ 594 and MPEP 2113.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frenz in view of Yorimichi (JP 2000-63527).

Frenz doesn't teach presence of agglomerate particles.

Yorimichi teaches grinding of hydrogel particles in the extrusion machine. See [0046]. Stacking up particles on one another would make agglomerate particles.

It would have been obvious for a person with ordinary skills in the art at the time of invention to use Frenz including agglomerate particles in view of Yorimichi because agglomerate particles provide more surface area for absorption.

Response to Arguments

Applicant's arguments, filed on 12/7/2009, with respect to Obviousness-Type Double Patenting Rejection have been fully considered and are persuasive.

Applicant's arguments filed on 12/7/2009 have been fully considered but they are not persuasive.

Applicant argues that Yorimichi (JP '527) does not polymerize the monomer solution to form a hydrogel, extrude the hydrogel to pulverize the hydrogel, dry the pulverized gel particles to obtain an aqueous-liquid-absorbing agent.

However, Yorimichi teaches all of them as stated in the action above.

Applicant argues that there is no suggestion of agglomerating the particles or at least a portion of particles.

However, Yorimichi teaches the hydrous gel (hydrogel) is uniformly ground so that particle size distribution may become sharp. Furthermore, it is ground with screw-

type extrusion machine. Agglomerating is a cluster like particle, which doesn't have any uniform shape. It is obvious for ordinary skilled artisan to get ground particles on top of each other to make agglomerating shape or control the extrusion machine and make shape like agglomerating.

Applicant argues that Yorimichi does not disclose liquid permeability enhancing agent.

However, Yorimichi teaches polyethyleneimine to be included in the compound. See [0030]. It is polycationic compound, thus meeting instant limitation.

Applicant argues that Yorimichi does not teach forming the water absorbent resin particles from an aqueous monomer solution having a monomer concentration of not lower than 35 wt% or higher than a saturated concentration.

However, the concentration of monomer in the aqueous solution is 20-60 wt%, which overlaps instantly claimed weight percentage range. See [0038].

Applicant argues that the saline flow conductivity of the claimed invention is different from the saline flow conductivity disclosed in Frenz (US 2002/0165288). The saline flow conductivity of Frenz is measured under different conditions.

However, it is not clear why saline flow conductivity measured from different method would be different. Saline flow conductivity is a property and measuring it from different methods does not change its value.

Applicant argues that the water absorption capacity of Frenz is sufficiently close to the claimed invention that the water absorption capacity inherently overlaps the claimed invention.

However, examiner did not state that the water absorption capacity *inherently* overlaps with the claimed invention. Examiner stated that, regarding water absorption capacity a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). Examiner's position is not directed to inherently overlapping as applicant argues.

Applicant argues that Frenz does not teach not less than 90 wt% of particles having particle diameter in the range of 150-600 μm as in claim 2.

However, as explained above, particulate diameter is 100 denier. See [0091]. No mention of percentage is made by Frenz so it is believed that 100% particles were intended. Crosslink substances are added to crosslinking taking place within the fiber. See [0098]. The composition described is the water-absorbent composition. See abstract.

Applicant argues that Yorimichi provides no suggestion either expressly or inherently that the particles are agglomerated. The action provided no basis to support the position. Stacking particles one on another would not inherently agglomerate the particles as apparently suggested in the action. Agglomeration of the particles requires more than mere contact or stacking of the particles.

However, Yorimichi teaches the hydrous gel (hydrogel) is uniformly ground so that particle size distribution may become sharp. Furthermore, it is ground with screw-type extrusion machine. See [0046]. Agglomerating is a cluster like particle, which

doesn't have any uniform shape. It is obvious for ordinary skilled artisan to get ground particles on top of each other to make agglomerating shape or control the extrusion machine and make shape like agglomerating.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRITESH DARJI whose telephone number is (571)270-5855. The examiner can normally be reached on Monday to Thursday 8:00AM EST to 6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. D./
Examiner, Art Unit 1793

/Steven Bos/

Primary Examiner, Art Unit 1793